

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	10/045.400
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (http://www.uspto.gov/ebc/efs/downloads/documents.htm, EFS Submission User Manual ePAVE)
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 U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
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Revised 01/29/2002

ERROR DETECTED	SUGGESTED CORRECTION SERIAL NUMBER: 10/41,400
ATTN: NEW RULES CASES	s: Please disregard english "Alpha" Headers, which were inserted by PTO software
1Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5Variable Length	Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> scetiont as some may be missing.
6Patentln 2.0 "bug"	A "bug" in Patentln version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) Normally, Patentln would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7Skipped Sequences (OLD RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped
	Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
Skipped Sequences (NEW RULES)	Sequence(s) missing. If Intentional, please insert the following lines for each skipped sequence. <10> sequence id number <400> sequence id number 000
9Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220><223> section is required when <213> response is Unknown or is Artificial Sequence
11Use of <220>	Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
Patentin 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13Misuse of n	n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.

AMC/MH - Biotechnology Systems Branch - 08/21/200



OIPE

DATE: 02/05/2002 RAW SEQUENCE LISTING PATENT APPLICATION: US/10/045,400 TIME: 17:06:00

Input Set : A:\ES.txt

Output Set: N:\CRF3\02052002\J045400.raw

Does Not Comply Corrected Diskette Needed

3 <110> APPLICANT: Moon, Chulso Mao, Li 6 <120> TITLE OF INVENTION: Dap-Kinase and Hoxa9, Two Human Genes Associated With Genesis, Progression, and Aggressiveness of Non-Small Cell Lung Cancer 9 <130> FILE REFERENCE: 10620-1U1 CALS 11 <140> CURRENT APPLICATION NUMBER: US/10/045,400 12 <141> CURRENT FILING DATE: 2001-11-29 14 <150> PRIOR APPLICATION NUMBER: US 60/250,083 15 <151> PRIOR FILING DATE: 2000-11-29 17 <160> NUMBER OF SEQ ID NOS: 7 19 <170> SOFTWARE: PatentIn version 3.0 21 <210> SEQ ID NO: 1 22 <211> LENGTH: 20 invalid-see iten 10 on Euro Summary 23 <212> TYPE: DNA C--> 24 <213> ORGANISM (Artificial/Unknown 26 <220> FEATURE: 27 <221> NAME/KEY: misc_feature 28 <222> LOCATION: (1)..(20) 29 <223> OTHER INFORMATION: HOXA9 PCR Primer 32 <400> SEQUENCE: 1 20 33 ccggccttat ggcattaaac 36 <210> SEQ ID NO: 2 37 <211> LENGTH: 20 38 <212> TYPE: DNA C--> 39 <213> ORGANISM: Artificial/Unknown 41 <220> FEATURE: 42 <221> NAME/KEY: misc_feature 43 <222> LOCATION: (1)..(20) 44 <223> OTHER INFORMATION: HOXA9 PCR Primer 47 <400> SEQUENCE: 2 20 48 agttggctgc tgggttattg 51 <210> SEQ ID NO: 3 52 <211> LENGTH: 218 53 <212> TYPE: DNA C--> 54 <213> ORGANISM: (Artificial/Unknown 56 <220> FEATURE: 57 <221> NAME/KEY: misc_feature 58 <222> LOCATION: (1)..(218) 59 <223> OTHER INFORMATION: HoxA9 Probe 62 <400> SEQUENCE: 3 63 ccggccttat ggcattaaac ctgaaccgct gtcggccaga aggggtgact gtcccacgct 60 65 tgacactcac actttgtccc tgactgacta tgcttgtggt tctcctccag ttgatagaga 120 67 aaaacaaccc agcgaaggcg cetteteega aaacaatgce gagaatgaga geggeggaga

180

RAW SEQUENCE LISTING DATE: 02/05/2002 PATENT APPLICATION: US/10/045,400 TIME: 17:06:00

Input Set : A:\ES.txt

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74 <212> TYPE: DNA														
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86 etceetaget gtgtteeege egeegeeeg getagtetee ggegetggeg ectatggteg	180 240													
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90 atgcatgagg ggcctacgga ggcgcaggag cggtggtgat ggtctgggaa gcggagctga	354													
92 agtcccctgg gctttggtga ggcgtgacag tttatc atg acc gtg ttc agg cag	334													
93 Met Thr Val Phe Arg Gln 94 1 5														
94	402													
97 Glu Asn Val Asp Asp Tyr Tyr Asp Thr Gly Glu Glu Leu Gly Ser Gly	402													
98 10 15 20														
100 cag ttt gcg gtt gtg aag aaa tgc cgt gag aaa agt acc ggc ctc cag	450													
101 Gln Phe Ala Val Val Lys Lys Cys Arg Glu Lys Ser Thr Gly Leu Gln														
102 25 30 35														
104 tat gcc gcc aaa ttc atc aag aaa agg agg act aag tcc agc cgg cgg	498													
105 Tyr Ala Ala Lys Phe Ile Lys Lys Arg Arg Thr Lys Ser Ser Arg Arg														
106 40 45 50														
108 ggt gtg age ege gag gae ate gag egg gag gte age ate etg aag gag	546													
109 Gly Val Ser Arg Glu Asp Ile Glu Arg Glu Val Ser Ile Leu Lys Glu														
110 55 60 65 70														
112 atc cag cac ccc aat gtc atc acc ctg cac gag gtc tat gag aac aag	594													
113 Ile Gln His Pro Asn Val Ile Thr Leu His Glu Val Tyr Glu Asn Lys														
114 75 80 85														
116 acg gac gtc atc ctg atc ttg gaa ctc gtt gca ggt ggc gag ctg ttt	642													
117 Thr Asp Val Ile Leu Ile Leu Glu Leu Val Ala Gly Gly Glu Leu Phe														
118 90 95 100														
120 gac ttc tta gct gaa aag gaa tct tta act gaa gag gaa gca act gaa	690													
121 Asp Phe Leu Ala Glu Lys Glu Ser Leu Thr Glu Glu Glu Ala Thr Glu														
122 105 110 115	720													
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125 Phe Leu Lys Gln Ile Leu Asn Gly Val Tyr Tyr Leu His Ser Leu Gln														
126 120 125 130	706													
128 atc gcc cac ttt gat ctt aag cct gag aac ata atg ctt ttg gat aga	786													
129 Ile Ala His Phe Asp Leu Lys Pro Glu Asn Ile Met Leu Leu Asp Arg														
150 155	834													
132 aat gtc ccc aaa cct cgg atc aag atc att gac ttt ggg ttg gcc cat 133 Asn Val Pro Lys Pro Arg Ile Lys Ile Ile Asp Phe Gly Leu Ala His	0.54													
133 ASR VAI PRO LYS PRO ARG THE LYS THE HE ASP PRE GLY LEU ALA HIS 134 155 160 165														
136 aaa att gac ttt gga aat gaa ttt aaa aac ata ttt ggg act cca gag	882													
136 and all gae til gga and gad til dad ade at the ggg acc cod gag 137 Lys Ile Asp Phe Gly Asn Glu Phe Lys Asn Ile Phe Gly Thr Pro Glu														
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RAW SEQUENCE LISTING DATE: 02/05/2002 PATENT APPLICATION: US/10/045,400 TIME: 17:06:00

Input Set : A:\ES.txt

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141 Phe Val Ala Pro Glu Ile Val Asn Tyr Glu Pro Leu Gly Leu Glu Ala 142 185 190 190 190 195 195 195 196 196 195 196	138	+++	~+ ~	~ a+	_	~~~	2+2	at a	220		~~~	aat	a++	~~+		a 2 a	aa2	020
144 gat atg tgg agt atc ggg gta ata acc tat atc ctc cta agt ggg gcc 978																		930
144 gat atg tgg agt atc ggg gta ata acc tat atc ctc cta agt ggg gcc 145 Asp Met Trp Ser Ile Gly Val Ile Thr Tyr Ile Leu Leu Ser Gly Ala 146 200 205 210 148 tcc cca ttt ctt gga gac act aag caa gaa acg tta gca aat gta tcc 149 Ser Pro Phe Leu Gly Asp Thr Lys Gln Glu Thr Leu Ala Asn Val Ser 150 215 220 225 230 152 gct gtc aca tac gaa ttt gag gat gat atc ttc agt aat acc agt gcc 153 Ala Val Asn Tyr Glu Phe Glu Asp Glu Tyr Phe Ser Asn Thr Ser Ala 154 235 240 155 cta gcc aaa gat ttc ata aga aga ctt ctg gc aag gat cca aag aga 157 Leu Ala Lys Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Lys 158 250 250 160 aga atg aca att caa gat agt ttg cag cat cct tgg gt acc aag cat aac atg gac 161 Arg Met Thr Ile Gln Asp Ser Leu Gln His Pro Trp Ile Lys Pro Lys 162 265 270 164 gat aca caa cag gca ctt agt aga aaa gca tac aga gat cca aag aga 165 Asp Thr Gln Gln Ala Leu Ser Arg Lys Ala Ser Ala Val Asn Met Glu 166 280 285 290 176 aga att caa gat gtt tg cag gcc cgg aaa aaa tga aca atc gtt cgc 169 Lys Phe Lys Lys Phe Ala Ala Arg Lys Lys Trp Lys Gln Ser Val Arg 170 295 300 171 295 300 172 ttg ata tca ctg tgc caa aga tta toc agg tca ttc ctg tcc aga agt 174 13 Leu Ile Ser Leu Cys Gln Arg Leu Ser Arg Ser Phe Leu Ser Arg Ser 177 Asn Met Ser Val Ala Arg Ser Asp Asp Thr Leu Asp Asp Asn Val Pro 182 345 184 ggc ctg cag cac ctt ctg ggc tca tta ctc ggc gat gat gat acc ctg gat gag gaa gac tcc 186 aac atg agt gtt gcc aga agc gat gat acc tcg gat gag gag acc cca 187 Asn Met Ser Val Ala Arg Ser Asp Asp Thr Leu Asp Asp Asp Asn Val Pro 182 345 184 ggc ctg cag cac ctc ctg ggc tca tta tcc acc gat gat gat acc tcg gat gar gat acc ctg gat gar gat gat acc acc gat gat gat acc ctg gat gat gat gat gat gat gat gat gat g		Pne	vaı		Pro	GIU	тте	vaı		туг	GIU	PIO	ьеи	_	Leu	GIU	Ala	
145 Asp Met Trp Ser Tle Gly Val Tle Thr Tyr Tle Leu Leu Ser Gly Ala 146 200 205 210 206 210 320																		070
146																		9/8
148 cc cca tt ctt gga gac act aag caa gaa acg tta gca aat gta tcc 1026 149 Ser Pro Phe Leu Gly Asp Thr Lys Gln Glu Thr Leu Ala Asn Val Ser 230 152 gct gtc acc tac gaa ttt gag gat gaa tac ttc agt aat acc agt gcc acc 1074 153 Ala Val Asn Tyr Glu Phe Glu Asp Glu Tyr Phe Ser Asn Thr Ser Ala 245 156 cta gcc aca gat ttc ata aga aga ctt ctg gtc aag gat cca aag aag aga ctg caa aga acg ata acc aga aga acg ata acc acc aga aga acg ata acc acc aga aga acc acc acc aga acc acc		_		Trp	Ser	lie	GTA		11e	Thr	Tyr	TTE		Leu	ser	GTÄ	Ala	
149 Ser Pro Phe Leu Gly Asp Thr Lys Glu Thr Leu Ala Asn Val Ser Ser								_										
150 215 220 225 230 1074 153 141 245 154 154 154 154 154 154 154 154 154 154 154 154 155 156 157 158							_		_		-	_		-		-		1026
152 gct gtc ac ac tac gas ttt gag gat gas tac ttc agt act acc agt gcc 1074			Pro	Phe	Leu	Gly	_	Thr	Lys	GIn	GLu		Leu	Ala	Asn	Val		
153 Ala Val Asn Tyr Glu Phe Glu Asp Glu Tyr Phe Ser Asn Thr Ser Ala 154 245																		
154		-	-			-			-	_			_			-	-	1074
156 cta gcc aaa gat ttc ata aga aga ctt ctg gtc aag gat cca aag aag 1122 157 Leu Ala Lys Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Lys 158	153	Ala	Val	Asn	Tyr		Phe	Glu	Asp	Glu	_	Phe	Ser	Asn	Thr		Ala	
157 Leu Ala Lys Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Lys 250 260 255 260	154					235					240					245		
158																		1122
1170 161 278 265 265 267 270 275 275 276		Leu	Ala	Lys	Asp	Phe	Ile	Arg	Arg	Leu	Leu	Val	Lys	Asp	Pro	Lys	Lys	
161	158				250					255					260			
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164 gat aca caa cag gca ctt agt aga aaa gca tca gca gta aac atg gag 165 Asp Thr Gln Gln Ala Leu Ser Arg Lys Ala Ser Ala Val Asn Met Glu 166 280 285 290 168 aaa ttc aag aag ttt gca gcc cgg aaa aaa tgg aaa tcc gtt cgc 1266 169 Lys Phe Lys Lys Phe Ala Ala Arg Lys Lys Trp Lys Gln Ser Val Arg 170 295 300 305 310 172 ttg ata tca ctg tgc caa aga tta tcc agg tca ttc ctg tcc aga agt 1314 173 Leu Ile Ser Leu Cys Gln Arg Leu Ser Arg Ser Phe Leu Ser Arg Ser 174 315 320 325 325 176 aac atg agt gtt gcc aga agc gat gat act ctg gat gag gaa gac tcc 1362 177 Asn Met Ser Val Ala Arg Ser Asp Asp Thr Leu Asp Glu Glu Asp Ser 178 330 335 325 340 180 ttt gtg atg aaa gcc atc atc cat cat cat acc acc acc acc a	161	Arg	Met	Thr	Ile	Gln	Asp	Ser	Leu	Gln	His	Pro	Trp	Ile	Lys	Pro	Lys	
165	162			265					270					275				
166	164	gat	aca	caa	cag	gca	ctt	agt	aga	aaa	gca	tca	gca	gta	aac	atg	gag	1218
168 aaa ttc aag aag ttt gca gcc cgg aaa aaa tgg aaa caa tcc gtt cgc 199 Lys Phe Lys Lys Phe Ala Ala Arg Lys Lys Trp Lys Gln Ser Val Arg 300 300 305 305 310 172 ttg ata tca ctg tgc caa aga tta tcc agg tca ttc ctg tcc aga agt 1314 173 Leu Ile Ser Leu Cys Gln Arg Leu Ser Arg Ser Phe Leu Ser Arg Ser 174 315 320 325 176 aac atg agt gtt gcc aga agc gat gat act ctg gat gag gaa gac tcc 177 Asn Met Ser Val Ala Arg Ser Asp Asp Thr Leu Asp Glu Glu Asp Ser 178 330 333 335 335 336 180 ttt gtg atg aaa gcc atc atc atc gcc atc aac gat gac aat gtc cca 1410 181 Phe Val Met Lys Ala Ile Ile His Ala Ile Asn Asp Asp Asn Val Pro 182 345 350 355 184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 186 360 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggc tgt ggg 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 190 375 380 385 390 192 aat att caa ata cta cag ttg ctc att aac aga ggc tcg aga atc gat 189 Qtc cac gdt gat aag ggc ggt tcc aat aac aga ggc tcg aga atc 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 410 200 ggc cac gtc gat acc ttg aaa tt ctc agt gag aac aac aac aac aac aac aac aac aac	165	Asp	Thr	Gln	Gln	Ala	Leu	Ser	Arg	Lys	Ala	Ser	Ala	Val	Asn	Met	Glu	·
169	166		280					285					290					
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172 ttg ata tca ctg tgc caa aga tta tcc agg tca ttc ctg tcc aga agt 1314 173 Leu Ile Ser Leu Cys Gln Arg Leu Ser Arg Ser Phe Leu Ser Arg Ser 174 315 316 320 320 325 325 326 327 328 329 320 325 326 327 327 328 328 329 329 325 327 328 329 329 329 325 327 320 320 325 326 327 327 328 329 329 329 329 325 327 320 320 320 320 320 325 327 326 327 327 328 329 329 329 329 329 320 320 320 320 320 320 320 320 320 320	169	Lys	Phe	Lys	Lys	Phe	Ala	Ala	Arg	Lys	Lys	Trp	Lys	Gln	Ser	Val	Arg	
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177 Asn Met Ser Val Ala Arg Ser Asp Asp Thr Leu Asp Glu Asp Ser 178 330 335 340 340 340 340 340 340 180 181 Pre 340 340 340 180 180 181 Pre 340 340 340 1410 181 181 181 181 181 181 181 181 181 181 182 182 345 350 350 355	174					315					320					325		
178 330 335 340 180 ttt gtg atg aaa gcc atc atc atc cat gcc atc aac gat gac aat gtc cca 1410 181 Phe Val Met Lys Ala Ile Ile His Ala Ile Asn Asp Asp Asp Asn Val Pro 182 184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 1458 186 360 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggg tgt ggg 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 140 194 395 400 405 195 400 405 196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tag ggc gtc gct cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 400 198 410 415 199 400 405 190 405 190 405 190	176	aac	atg	agt	gtt	gcc	aga	agc	gat	gat	act	ctg	gat	gag	gaa	gac	tcc	1362
180 ttt gtg atg aaa gcc atc atc atc cat gcc atc aac gat gac aat gtc cca 1410 181 Phe Val Met Lys Ala Ile Ile His Ala Ile Asn Asp Asp Asn Val Pro 345 350 355 184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 360 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggc tgt ggg 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc ggc tcg aga atc gat asc gat gat asc gat gat asc gat gat asc gat asc gat gat asc gat gat asc gat asc gat	177	Asn	Met	Ser	Val	Ala	Arg	Ser	Asp	Asp	Thr	Leu	Asp.	Glu	Glu	Asp	Ser	
181 Phe Val Met Lys Ala Ile Ile His Ala Ile Asn Asp Asp Asp Val Pro 182 345 345 350 355 184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 360 360 360 365 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggc tgt ggg 189 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 390 190 375 380 380 385 390 385 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 194 395 400 405 195 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgc cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 40 410 415 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 1650 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu	178				330					335					340			
182 345 350 355 184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 360 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggc tgt ggg 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 405 196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 1650 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu	180	ttt	gtg	atg	aaa	gcc	atc	atc	cat	gcc	atc	aac	gat	gac	aat	gtc	cca	1410
184 ggc ctg cag cac ctt ctg ggc tca tta tcc aac tat gat gtt aac caa 1458 185 Gly Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 188 ccc aac aag cac ggg ac cct cca tta ctc att gct gct ggc tgt ggg 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 190 375 380 Tr Brown Brown 385 390 390 192 aat att caa ata caa ttg ctc att aaa agc tcg aga atc gat 1854 193 Asn Ile Gln Leu Leu Ile Lys Arg	181	Phe	Val	Met	Lys	Ala	Ile	Ile	His	Ala	Ile	Asn	Asp	Asp	Asn	Val	Pro	
185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 186	182			345	_				350				_	355				
185 Gly Leu Gln His Leu Leu Gly Ser Leu Ser Asn Tyr Asp Val Asn Gln 186	184	ggc	ctg	cag	cac	ctt	ctg	ggc	tca	tta	tcc	aac	tat	gat	gtt	aac	caa	1458
186 360 365 370 188 ccc aac aag cac ggg aca cct cca tta ctc att gct gct ggc tgt ggg 1506 189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 380 385 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 390 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 194 405 194 395 400 405 196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct ggt cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 1650 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu																		
189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Gly Cys Gly 190 375 380 385 390 390 192 aat att caa ata caa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp Ile Asp Asp 400 405 406 405 405 406 405 406 405 406 406 406 406 406 406 406 406 406 406 406 406 406 406 406 406 406 406				•														
189 Pro Asn Lys His Gly Thr Pro Pro Leu Leu Ile Ala Ala Gly Cys Gly 190 375 380 385 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 405 194 395 400 195 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 410 198 410 415 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 1650 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu	188	ccc	aac	aag	cac	ggg	aca	cct	cca	tta	ctc	att	gct	gct	ggc	tgt	ggg	1506
190 375 380 385 390 192 aat att caa ata cta cag ttg ctc att aaa aga ggc tcg aga atc gat 1554 193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 194 395 400 405 196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 1650 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu																		
193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 194				_		_									_	_		
193 Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys Arg Gly Ser Arg Ile Asp 194	192	aat	att	caa	ata	cta	caq	ttg	ctc	att	aaa	aga	ggc	tcq	aga	atc	gat	1554
194 395 400 405 196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgg cat 1602 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu																		
196 gtc cag gat aag ggc ggg tcc aat gcc gtc tac tgg gct gct cgg cat 197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu													-		-		-	
197 Val Gln Asp Lys Gly Gly Ser Asn Ala Val Tyr Trp Ala Ala Arg His 198 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu		gtc	caq	gat	aag	ggc	ggq	tcc	aat	gcc	gtc	tac	tgg	gct	gct	cgq	cat	1602
198 410 415 420 200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu																		
200 ggc cac gtc gat acc ttg aaa ttt ctc agt gag aac aaa tgc cct ttg 201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu				-		•	-					-	•			-		
201 Gly His Val Asp Thr Leu Lys Phe Leu Ser Glu Asn Lys Cys Pro Leu		qqc	cac	gtc	gat	acc	ttq	aaa	ttt	ctc	aqt	gag	aac	aaa		cct	ttq	1650
		•			•			-						_	-			

RAW SEQUENCE LISTING DATE: 02/05/2002
PATENT APPLICATION: US/10/045,400 TIME: 17:06:00

Input Set : A:\ES.txt

204	gat	gtg	aaa	gac	aag	tct	gga	gag	atg	gcc	ctc	cac	gtg	gca	gct	cgc	1	698
205	Asp	Val	Lys	Asp	Lys	Ser	Gly	Glu	Met	Ala	Leu	His	Val	Ala	Ala	Arg		
206		440					445					450						
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209	Tyr	Gly	His	Ala	Asp	Val	Ala	Gln	Val	Thr	Cys	Ala	Ala	Ser	Ala	Gln		
210	455					460					465					470		
					-									cac			1	794
	Ile	Pro	Ile	Ser	_	Thr	Lys	Glu	Glu		Thr	Pro	Leu	His	_	Ala		
214					475					480					485		_	
	_								-		-		_	gaa	-		1	842
	Ala	Trp	His	_	Tyr	Tyr	ser	Val		гля	Ala	Leu	Cys	Glu	Ala	GTA		
218				490					495					500			-	000
														ctc			1	890
	Cys	ASN		ASN	TTE	гаг	ASI		GIU	GTĀ	GLU	THE	515	Leu	Leu	Thr		
222	~~~	+ a+	505	200		+ > 0	020	510	2+0	a+a	a a a	+ ~+		~~~	422	aat	1	938
	-		-					_						gcc Ala			1	930
226	AIG.	520	Ала	ary	ату	TYL	525	_	116	Val	Giu	530	пец	ALG	GIU	HTS		
	απα		gac	ctt	aat	act			ааσ	gac	ana		att	gcc	ctt	cat	1	986
														Ala			_	,,,,
230	-					540	01.	····	-1-	r	545					550		
		act	qta	aga	caa	tqt	caq	atq	gag	qta	atc	aaq	act	ctc	ctc	aqc	2	034
														Leu				
234					555	_				560		-			565			
236	caa	ggg	tgt	ttc	gtc	gat	tat	caa	gac	agg	cac	ggc	aat	act	ccc	ctc	2	082
237	Gln	Gly	Cys	Phe	Val	Asp	Tyr	Gln	Asp	Arg	His	Gly	Asn	Thr	${\tt Pro}$	Leu		
238				570					575					580				
			-	_					-			_		gcc			* · 2	130
	His	Val		Cys	Lys	Asp	Gly		Met	Pro	Ile	Val		Ala	Leu	Cys		
242			585					590					595					4 7 0
	_													cga			2	178
	GLu		Asn	Cys	Asn	Leu	-	TTE	ser	Asn	гăг	_	GTĀ	Arg	Thr	Pro		
246	a+ a	600	att	~~~	~~~	220	605	~~~	2+0	at a	~~~	610	at a	200	+ = +	ata	2	226
	_				-						-		-	cgg Arg			2	220
250		nis	пеп	Ата	Ala	620	ASII	Сту	116	neu	625	Val	Val	ALG	1 Y 1	630		
		cta	atα	σσа	acc		att	ααα	aca	cta		aca	gac	gga	ааσ		2	274
	-	-	-					_	-					Gly			-	
254	CID	Dea	1100	011	635	001	, 41	014		640			P		645			
	σca	σaa	gat	ctt	-	aσa	tca	σaa	caq		σασ	cac	ata	gca		ctc	2	322
														Ãla				
258			-	650		,			655					660	-			
260	ctt	gca	aga	ctt	cga	aag	gat	acg	cac	cga	gga	ctc	ttc	atc	cag	cag	2	370
														Ile				
262			665					670					675					
														aag			2	418
	Leu		Pro	Thr	Gln	Asn		Gln	Pro	Arg	Ile		Leu	Lys	Leu	Phe		
266		680					685					690						
268	ggc	cac	tcg	gga	tcc	ggg	aaa	acc	acc	ctt	gta	gaa	tct	ctc	aag	tgt	2	466

RAW SEQUENCE LISTING DATE: 02/05/2002 PATENT APPLICATION: US/10/045,400 TIME: 17:06:00

Input Set : A:\ES.txt

	Gly	His	Ser	Gly	Ser		Lys	Thr	Thr	Leu		Glu	Ser	Leu	Lys		
	695					700	++~		~~~	aa+	705	000	202	at a	tat	710 tog	2514
	ggg																2314
	Gly	Leu	Leu	Arg		Pne	Fue	Arg	Arg	_	AIG	PIO	ALG	пеп	725	261	
27					715	++~		a a t	+ ~ ~	720	a+ a	aat	+ a+	220		202	2562
	acc																2302
	Thr	ASII	ser		ALG	Pile	PIO	PIO	735	PIO	цеи	ALG	361	740	FIU	1111	
27	gtc		-+-	730	-+-	225	222	at a		003	~~~	+ 00	a 2 a		ata	ant	2610
																	2010
	Val	ser		ser	TTE	ASII	ASII	750	тут	PIO	GTÅ	Cys	755	ASII	V CL I	261	
283			745	~~~	200	2+4	2+4		a 2 a	000	aat	att		222	aaa	ato	2658
28	gtg Val	agg	age	N ma	age	Mot	Mot	Dho	Clu	Dro	99L	Tou	Thr	Luc	999 C117	Mot	2030
			ser	AIG	ser	мес	765	Pne	GIU	PIU	СТУ	770	1111	Буз	СТУ	Mer	
28		760	~+~	+++	~+~	~~~		200	020	030	aaa		taa	taa	aaa	σat	2706
	ctg Leu																2700
		GLU	val	PHE	val	780	PIO	1111	птэ		785	птэ	Cys	DCI	ALU	790	
	775 gac	a2.a	taa	300	220		2+0	as a	ato	cad		act	tat	tta	aat		2754
	Asp																2,31
	_	GIII	261	1111	795	ніа	116	мэр	116	800	ווכח	ALU	1 y 1	LCu	805	Cly	
29	gtt.	aaa	mat.	tta		ata	taa	ααα	ttc		ααа	aat	cct	ata		ttc	2802
	yuu Val																2002
29		СТУ	изЪ	810	SCI	Vai	ııp	GIU	815	JCI	OLY	11511	110	820	- 1 -	1110	
)) tgc	tat	tat		tat	+++	act	aca		gat	CCC	acq	tca		cat	att	2850
30	l Cys	Cve	Tyr	Agn	Tur	Dhe	Δla	Δla	Agn	Δsn	Pro	Thr	Ser	Tle	His	Val	
30		Cys	825	пор	- y -	1 110	mu	830		p	1.10		835				
	Lgtt	atc		aut	cta	αаа	ααα		tat	aaa	atc	caσ		aac	cca	ata	2898
	Val																
30		840		001	204	01	845		-1-			850					
	, 3 att		t.aa	ctc	aαt.	t.t.c		aaσ	tcc	ctt	atc	-	att	qaa	qaa	ccc	2946
	Ile																
	855		r			860		-1-			865					870	
	ata	qcc	ttc	aat	aac		ctq	aaq	aac	cca	ctc	caa	gtt	gtc	ctg	gtg	2994
31	3 Ile	Ala	Phe	Glv	Glv	Lvs	Leu	Lvs	Asn	Pro	Leu	Gln	Val	Val	Leu	Val	
31				_	875	-		•		880					885		
	gcc	acc	cac	gct	qac	atc	atg	aat	gtt	cct	cga	ccg	gct	gga	ggc	gag	3042
	7 Ala																
31				890	_				895					900			
32) ttt	gga	tat	gac	aaa	gac	aca	tcg	ttg	ctg	aaa	gag	att	agg	aac	agg	3090
	l Phe																
32		_	905	-				910					915				
32	! ttt	gga	aat	gat	ctt	cac	att	tca	aat	aag	ctg	ttt	gtt	ctg	gat	gct	3138
32	5 Phe	Gly	Asn	Asp	Leu	His	Ile	Ser	Asn	Lys	Leu	Phe	Val	Leu	Asp	Ala	
32		920					925					930					
	ggg																3186
32	Gly	Ala	Ser	Gly	Ser	Lys	Asp	Met	Lys	Val		Arg	Asn	His	Leu		
	935					940					945					950	
33	2 gaa	ata	cga	agc	cag	att	gtt	tcg	gtc	tgt	cct	ccc	atg	act	cac	ctg .	3234
33	3 Glu	Ile	Arg	ser	Gln	Ile	Val	Ser	Val	Cys	Pro	Pro	Met	Thr	His	Leu	

VERIFICATION SUMMARY

DATE: 02/05/2002 TIME: 17:06:01

PATENT APPLICATION: US/10/045,400

Input Set : A:\ES.txt

Output Set: N:\CRF3\02052002\J045400.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number L:24 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:1 L:39 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:2 L:54 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3